

Preface

NAPEX XXIII took place at the DoubleTree Tyson Corner Hotel in Falls Church, Virginia on June 2 and 3, 1999. Nasser Golshan of JPL, the meeting organizer, welcomed the participants and delivered opening remarks recognizing the outstanding work of the NASA Propagation Experimenters community, excellent participation by the U.S. space community, and NASA's foresight for timely investment in this critical technology for utilization of the Ka band. He was followed by Faramaz Davarian of Hughes Space and Communications, who summarized the critical dependence of the U.S. space community on NASA's leadership role in characterization of radio wave propagation at higher frequencies to reduce the implementation risk of new wide-band space communication systems.

Session I, "ACTS Propagation Study Results and Outcomes," was chaired by Louis Ippolito of Stanford Telecom and covered the results of five years of Ka-band radio wave propagation experiments at seven sites in North America. Session II, "Ka-Band Propagation Studies and Models," was chaired by Wolf Vogel of the University of Texas at Austin and provided the latest developments in modeling and analysis of experimental results about radio wave propagation phenomena for design of Ka-band satellite communication systems. Session III, "Propagation Research Topics," was chaired by Julius Goldhirsh of Johns Hopkins University and covered a diverse range of propagation topics of interest to the space community, including overviews of handbooks and databases on radio wave propagation.

A short session chaired by David Rogers of the Communications Research Centre of Canada and Wolf Vogel was held on the afternoon of June 3 to mark the successful completion of the ACTS Ka-Band Propagation Campaign. David Westenhaver, the ACTS data center subcontractor, distributed sets of CD-ROMs containing the complete record of five years of the campaign and reported that the archived data incorporates all input and corrections from individual experimenters. It was agreed to allow an additional two weeks to receive any last-minute corrections to the database. Pending final confirmation, all distributed CD-ROMs are marked as peer review copies. Extensive discussions were held on the publication of the findings, and it was agreed that the results should be published in a special issue of *IEEE Proceedings*.

The success of the meeting owes a lot to the speakers and session chairs and the active participation of all attendees. Special thanks go to Roberto Acosta of NASA's Glenn Research Center for his support of the NASA Propagation Program through the ACTS Project. Finally, we thank Mardy Wilkins of JPL for meticulously taking care of many administrative details of the meetings and Nelson Carter of JPL's Technical Information Section for coordinating the publication of this document.

—N. Golshan and C. Ho